AMENDMENTS

Please amend the application as follows:

In the Claims:

Please cancel claims 1-15

Please enter the following newly added claims:

B1

16. (newly added) A thin flange for use with a vacuum system, comprising:

a generally circular member having in inner diameter, an outer diameter, a first face having a first sealing surface and an opposed, substantially parallel second face having a second sealing surface, a first plurality of bolt holes extending from the first face to the second face, and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and the second plurality of bolt holes arranged in a circular pattern having a second diameter that is smaller than the first diameter.

17. (newly added) The thin flange of claim 16, wherein the first plurality of bolt holes are configured to be aligned with a first standard bolt hole located on a first standard thickness flange and a second standard bolt hole located on a second standard thickness flange so that a bolt may extend through the first standard bolt hole, through the thin flange, and through the second standard bolt hole.

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18. (newly added) The thin flange of claim 16, wherein the first face sealing surface and the second face sealing surface comprise a knife edge.

19. (newly added) The thin flange of claim 16, wherein the second plurality of holes comprises threaded bores.

20. (newly added) The thin flange of claim 16, further comprising at least one feedthrough.

21. (newly added) The thin flange of claim 16, wherein the thin flange contains at least one mounting feature.

22. (newly added) The thin flange of claim 21, wherein the at least one mounting feature comprises at least one threaded bore.

23. (newly added) The thin flange of claim 21, wherein the at least one mounting feature comprises at least one groove formed on an inner surface of the thin flange.

24. (newly added) A vacuum component mounting system, comprising:

a first flange having a first flange sealing surface and a first plurality of bolt holes extending therethrough, the bolt holes disposed in a first generally circular pattern having a first diameter;

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a second flange having a first flange sealing surface and a second plurality of bolt holes extending therethrough, the bolt holes disposed in the first generally circular pattern; and

a thin flange disposed between the first flange and the second flange, the thin flange comprising a generally circular member having in inner diameter, an outer diameter, a first face having a first sealing surface and an opposed, substantially parallel second face having a second sealing surface, a third plurality of bolt holes extending from the first face to the second face, and a fourth plurality of bolt holes, the third plurality of bolt holes arranged in the first generally circular pattern and the fourth plurality of bolt holes arranged in a second generally circular pattern having a second diameter that is smaller than the first diameter.

25. (newly added) The vacuum component mounting system of claim 24, wherein the first, second, and third plurality of bolt holes are aligned so that a bolt may extend through the first flange, the thin flange, and the second flange.

26. (newly added) The vacuum component mounting system of claim 24, wherein the thin flange first and second sealing surfaces are configured to interact with the first flange sealing surface and the second flange sealing surface, respectively, to form a vacuum tight seal.

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27. (newly added) The vacuum component mounting system of claim 24, wherein the first thin flanges sealing surface and the second thin flanges sealing surface comprise a knife edge.

28. (newly added) The vacuum component mounting system of claim 24, wherein the fourth plurality of holes comprises threaded bores.

29. (newly added) The vacuum component mounting system of claim 24, wherein the thin flange further comprising at least one feedthrough.

30. (newly added) The vacuum component mounting system of claim 24, wherein the thin flange contains at least one mounting feature.

31. (newly added) The vacuum component mounting system of claim 30, wherein the at least one mounting feature comprises at least one threaded bore.

32. (newly added) The vacuum component mounting system of claim 30, wherein the at least one mounting feature comprises at least one groove formed on an inner surface of the thin flange.

33. (newly added) A thin flange for use with a vacuum system, comprising:

a member having a first face having a first sealing surface and an opposed,

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substantially parallel second face having a second sealing surface, a first plurality of bolt holes extending from the first face to the second face, and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and the second plurality of bolt holes disposed inside the first diameter.

34. (newly added) The thin flange of claim 33, wherein the first plurality of bolt holes are configured to be aligned with a first standard bolt hole located on a first standard thickness flange and a second standard bolt hole located on a second standard thickness flange so that a bolt may extend through the first standard bolt hole, through the thin flange, and through the second standard bolt hole.

35. (newly added) The thin flange of claim 33, wherein the first face sealing surface and the second face sealing surface comprise a knife edge.

36. (newly added) The thin flange of claim 33, further comprising at least one feed-through.

37. (newly added) The thin flange of claim 33, wherein the thin flange contains at least one mounting feature.

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